1: Warner E-5 (1926-1929)1937
OI 17 Murngin OI 17

462 food, yams, and other vegetable food. This is generally done communally by the women in the bush where the food is gathered, but women also cook within the camp. Men cook the larger animals, [557] prepare the stone ovens, place the large chunks of meat in the fire, and tend the food to see that it is being properly treated.—It is considered [562] as within the bounds of propriety for the man to move about the camp at night in the way he pleases, but "all women must stay in the house when the men are at home."

851 Definite taboos are removed from a man's diet when he becomes a father (see pages 68 and 69), as from a woman's when she becomes a 262 mother or too old to have children. After the birth of the child, the parents paint themselves. He takes the bones of his first kills from the basket which had been made by his mother and carries them some distance from the camp. Here a hollow log is cut in the same shape as that for the bones of a dead man, and the bones are put inside it. The "coffin" is put up in the camp in the same manner as a dead man's carved hollow-log coffin. The people who have had meat from the boy while he could not eat put presents of food in his clan's symbolic well, made while he was painting himself.—If a man had eaten [626] of the tabooed foods while in the lower age grades, it is supposed he would become weak and unable to throw a spear in a spear fight; in a makarata it is likely that a spear will go into his leg, it will swell up and his flesh grow rotten while the spear is in his leg. This will also happen if the bones of the animals killed are not put in a hollow log and treated properly. If a young childless man ate porcupine, he would not grow up because "porcupine is a short one."

851 The reason given for the release from the taboos (see also page 69) is that the young man "becomes more quiet then and does not run about everywhere after other women. He stays in one place and looks out for his own galle and children." In reality, his social personality has grown so that his actual relatives include descending relatives as well as ascending. The birth of a child heightens his emotional ties with his relatives who have children who will marry his children and, in all, puts him in a different status, which is expressed by the release of the food taboos. All this underlying thought agrees with the Murngin idea that marriage does not become complete and permanent until a child is born.

561 Age grading in Murngin societies is highly ritualistic and controls a man's religious life far more than it does his ordinary daily existence. A man's religious knowledge and his understanding of the sacred

1: Warner E-5 (1926-1929)1937
OI 17 Murngin OI 17

462 222 horde gathering and is intensified by it. The women gather small animals and all vegetable food, and the men fish and kill larger animals, although a man might gather yams or lily bulbs for himself if he were hungry. The women of the various clans of allied groups often go on foraging expeditions together.

2. *Gathering and Preparation of Food—Sexual Division of Labor*

462 261 224 The women furnish the bulk of the daily food. The men's contribution of meat, although much more prized, is less certain. When kangaroos, wallabies, or emus are speared, turtles, dugong or porpoises harpooned, the whole group gorges itself after the meat has been divided properly and cooked in stone fires and ovens. The women are supposed to supply the food for the men while they perform the sacred rituals; although the men may hunt, fish, or go harpooning for sea animals at this time, they do it casually and not as part of their daily routine.

224 In the usual method of hunting kangaroos, a man or several men cover themselves with mud to prevent the kangaroo from seeing and smelling them and wait at a narrow part of the mangrove jungle. A group of young boys, sent to the other end of the jungle, spread out in a long line and start moving toward the men. They bark in a very high tone in imitation of the dingo. The boys progress fairly slowly in order not to frighten the kangaroos into too rapid motion. When the kangaroos get within throwing distance the men attempt to hit them with their stone spears. Kangaroos are also stalked; success here is possible because the animal usually sleeps in the daytime and can easily be approached to within accurate throwing distance.[2]

252 After an opossum has been treed and captured, it is hit on the head and the entrails are removed immediately. The intestinal fat is pulled off and cooked where the animal is captured. The intestines are carefully cleaned and opened and the gut is wrapped around the handle of a spear-thrower. When the opossum is to be cooked, all the openings of the carcass are closed, the hair is singed off, and the carcass put in the ashes and covered over with leaves and ashes. It is not cooked with a stone fire, as are larger animals, such as turtle, emu, kangaroo,

[151] [2] The Murngin are expert in identifying footprints. A little girl eight or nine years old can immediately tell one who made a particular footprint even though there are a hundred or more people who have placed their imprints on the earth about it. This is true even though the member is not present and the print has been made sometime in the past. Small female children of this age would be the poorest of any of the Murngin at identifying footprints.

1: Warner E-5 (1926-1929) 1957
OI 17 Murngin OI 17

wallaby and dugong. The flying fox is prepared in the same way as the opossum.

Flying foxes are caught in the daytime. They sleep in the mangrove jungles. The most favorable time for hunting them is during the mating season when they make a noise during the daytime. The native sneaks up while it is light and climbs the tree where they are suspended. He either catches them with his hands or hits them with a club. The wing bones of the flying fox are pulled out, and sometimes the native closes the other apertures of the carcass, puts his lip to one of the wing-bone holes and blows up the fox with air. This is supposed to make the animal fatter. If a large number of these bats are caught, they are cooked in a stone fire instead of the ordinary ash fire.

A snake is either hit on the head when lying on the ground, or if hunted by an expert, pulled out of its hole. The people on the Goyder River kill the snake by hitting it on the back of the head. People farther east do not do this and are generally more afraid of snakes than those in the Goyder River district and the people west of them. The stunned snake is held by the head and whirled round and round. This tends to force the meat toward the tail. The snake is then stretched out and left until dead. Then it is coiled in a circle and tied in four places. It too is cooked in ashes, as are iguanas.

Birds, including the cockatoo, egret, duck, ibis, and other water birds, are stalked. A spearman with a fish spear and screen of branches stalks them until he gets within accurate throwing distance. All birds except the emu are cooked on a stone fire. Only the large ones are gutted. When an emu is seen, bushes are gathered and fashioned into a screen to be carried before the spearman, who maneuvers to a position in which the wind will be against him, no sound will carry, and the emu cannot smell his sweat. This method is also used for kangaroos and other game that is stalked. The spear is put in the spear-thrower and carried on the shoulder with the head pointing out over the bushes. Emus are sometimes hunted by waiting in a tree by the water hole where they come to drink. A long spear with double prongs is used here. Kangaroos are ordinarily not hunted in this manner but occasionally a man may wait at a well for rock kangaroos.

When an emu is speared the native rushes up and puts his foot on the abdomen. The bird is carefully watched to see if there is much excretion, for if so he is thought to be fat, otherwise he is considered thin and poor eating. The neck and legs are tied up for carrying, a fire is made, a paper-bark receptacle is fashioned, and water is brought and

1: Warner E-5 (1926-1929)1937
OI 17 Murngin OI 17

252 put beside the bird. The feathers are plucked and placed in the water, and the emu is put in the fire to remove the smaller feathers. The wet feathers are then made into a small brush which is rubbed against the body to remove the remaining feathers and burned quills.

The abdomen is opened down the center and a large enough aperture made to admit the hand and pull out the entrails. The heart may or may not be removed. When the intestines are pulled out they are cut up into eight-inch pieces, the crop being cut off by itself. A stick is used to turn the pieces, including the crop, inside out, and the inner lining is removed. All the pieces are washed and the two ends of the entrails tied with grass or string. A small hole is dug, heated stones from a large fire are placed in it, and, on top of them, large green leaves. The intestines are then put on the leaves and covered with another coating of leaves, stones, and a final covering of earth. The food is then left to steam until it is considered properly cooked. The intestines swell up and the intestinal fat melts. This is the purpose of turning them inside out and tying them, since the fat thus retained is considered a great delicacy. While the intestines are cooking other stones are pulled out of the large fire and a large hole is made in the ground in which the stones and a coating of leaves are placed. The emu is first filled with hot stones and then placed on the leaves and covered with more leaves and stones, and the hole is then filled up with earth and grass. While the emu cooks the intestines are eaten.

When a turtle has been harpooned and beached, the head and neck are cut off, hot stones which have been prepared are pushed inside, and the neck and anus are filled with leaves. This makes a kind of steam oven of the turtle's body. While steaming, the turtle is turned on its back. A sharp stone knife (now usually a steel one) is used to split the shell from neck to tail. A parallel split about one inch from the other is made and the strip of shell removed. Then the hunter, starting where the dorsal and ventral shells meet, pulls back on the shell or has a boy pull while he cuts, sometimes with the aid of a stone hitting against his knife.

After this, the leg bones are broken and chunks of meat cut from the animal. This opens the body so that the entrails are in view, now well steamed and, according to native taste, thoroughly cooked. They are eaten immediately. The liver is put in the fire and cooked with coals; it is eaten by the older men. The little boys are given the shells 272 to pick. The blood is poured into a receptacle and drunk by the men.

1: Warner E-5 (1926-1929) 1937
OI 17 Murngin OI 17

Everything that can be digested is eaten, but nothing is done with bone or shell. When the Malays were trading with the natives the shell was exchanged for Malay products.

A man who goes turtle harpooning usually takes three or four men with him to paddle the canoe. He is considered the leader, but helps with the paddling while looking for turtle. The canoe goes beyond the breakwater out into the open sea. Along the sand beaches a goodly number of these animals can be found swimming in to shore to lay their eggs. When the head of the turtle is sighted all the oarsmen paddle as rapidly and silently as possible. They hold their heads and bodies down as low as possible so as not to be seen. When the canoe gets within range the harpooner articulates his harpoon to his spear-thrower and aims it just back of the turtle's head. If he strikes, the turtle dives, taking the head of the harpoon with the rope following to the sea bottom. The rope is held on to if it is possible; if not, it is picked up again when the animal rises sufficiently to bring the rope within reach. When the turtle comes up for air he is sometimes speared again, once more goes down, and the rope again held. When the rope becomes slack and it is felt that the turtle has tired itself, a man jumps overboard, puts his hands at the side of the turtle and attempts to turn it on its back. When he has it in this position the other men pull up on the rope. They catch hold of the turtle's legs and pull it on board. It is then hit on the head with a club. This has to be done carefully because a bite in a vulnerable spot would probably result in death.

Eggs of three species of turtle are eaten. Buckingham and Arnhem Bays are supposed to furnish the largest supply. Nests of crocodiles are sought out along the swampy river banks and their eggs gathered and eaten.

Sharks and crocodiles are harpooned, but usually speared. The backbone of a crocodile is chopped in back of the hind legs to sever the tail and to prevent its striking the hunter. When a sting ray is speared its tail is held in the mouth to prevent the fish's barbed prong from striking the spearsman while he is killing it.

The shallow rock bottoms along the seacoast or the white sand bottoms of the long low beaches where the water is knee to waist deep are the favorite fishing places. A spear-thrower is nearly always used with a fish spear.

Poison is sometimes used to stupefy fish, which then float in the water until gathered in. Dangi, an unidentified vegetable product, is

1: Warner E-5 (1926-1929)1937
OI 17 Murngin OI 17

macerated and placed in the pool. Some of the writer's informants claim that a poison grass is used similarly.

A fish is cut in halves the long way and cooked immediately because it is believed that if a bit old when eaten it causes leprosy (but see Magic, page 207).

Oysters, periwinkles, and the many varieties of bivalves gathered by the women are cooked on the shore at the spot where they are collected. A fire is made over stones and the shellfish put on the hot stones and embers. The shells open or crack and the flesh is removed and eaten by the women or placed in small receptacles to be carried home to the men.

Honey is gathered by both sexes, but usually by men. When a hive is discovered in a hollow tree that is not too large the tree is cut down and the trunk split open. The honey is usually eaten where found. [136] Gathering honey is a painless task in Australia because the native bees are stingless. The honey is often put in a water-tight basket, mixed with water and drunk as a beverage. It is never allowed to ferment; the natives have no intoxicating drink. The wax is formed into a ball and put in the men's baskets to be used in the construction of various implements.

Pandanus fruit, ripening about August, is cut up into fine pieces and cooked. The small cabbage palm is gathered about the same time, the whole trunk of the plant being cooked and beaten on a log, and the glutinous product eaten. Spear grass is chewed by the children as well as the other people.

Cycad palm nuts are gathered from the center of the trees by the women with the aid of a forked stick placed against the trunk to make a rough ladder. The nuts are knocked off with a club if they are too high to reach. The outside skin is removed and the kernels are placed in a large basket which is submerged in a fresh-water pool and allowed to remain several days until the poisonous qualities of the green fruit are removed. Sometimes the women first heat the nuts, thus reducing the time for soaking them.

Several varieties of tree grubs are eaten. Both men and women gather them. They select trees which have the proper indications upon them, split open the trunk, and remove the grubs which are washed and eaten raw. They look much like the entrail of a fowl and taste much like a snail.

The nests of all the larger birds are robbed and the eggs eaten. During the proper season the various sea birds lay their eggs in great

1: Warner E-5 (1926-1929)1937
OI 17 Murngin OI 17

313 Wood is chosen for its degree of hardness and weight and also for its shape according to the purposes of the object to be made. The main forms used are (1) long, slender, light (or heavy) shafts; (2) hollow logs; (3) roots with a well-defined arc; (4) long, straight, slender trunks with thick roots running off at a right angle from the shaft; (5) forked sticks; (6) ends of branches with many twigs and leaves; (7) any variety of dry wood; and (8) very large light wood tree trunks.

314 Three types of bark are used: (1) a long, thick, wide type found on the trunk of the larger eucalyptus; (2) thin paper-like bark from the Melaleuca; and (3) long thin fibers of root bark easily macerated.

Many varieties of leaves are technological material. They are usually [352] gathered in bundles by breaking off branches, but one large-leafed species is used singly as a plate on which to put fresh meat for cooking.

The long reeds of the water-lily ponds, spear grass particularly, and many other varieties of reeds are utilized.

237 The few animal materials used are, from land animals: kangaroo fat, kangaroo gut, kangaroo leg bones, bird feathers, bird bones (particularly leg), opossum fur, opossum gut and human hair; from sea animals: sting-ray prongs, fish and shark vertebrae, bivalve shells, and the melon shell.

Deposits of red ocher and pipe clay are mined along certain portions 317 of the seacoast. Yellow ocher is found in outcroppings. Round river 316 stones about the size of goose eggs are gathered. Diorite stones are also used. Quartzite is quarried from outcroppings. Ordinary earth and sand are used in making houses and ceremonial objects on the ground. Rock 342 ledges forming caves are utilized as shelters during the rainy season. 312 Rock basins which catch rain water are used as types of primitive cisterns to supply water in the absence of wells and fresh-water courses.

3. *General Description of Technical Methods Used in Making Raw Materials into Cultural Artifacts*

000 Only the general methods by which raw material is formed into artifacts will be discussed here. Each specific technique will be described in the section dealing with the articles manufactured.

412 The chief tools used with food are the ground stone axe,[4] a knife (formerly made of bone, but, since the Malay contacts, of iron), and a variety of bivalve shell.

322 Cylindrical wooden articles are made by cutting down a tree or

[4] The iron tomahawk is now used in its place.

1: Warner E-5 (1926-1929) 1937
OI 17 Murngin OI 17

Usually when the trap is to be used an old man goes out into the swamp and stirs the fish up by walking around in the morass of ferns and moss. While he does this he feels with his toes in the mud and water at the roots of the fern trees for small fresh-water turtles and prawns.

6. Other Implements

Digging Stick.—The digging stick is used only by women and carried by them. It is normally about four feet long, but varies from three to six feet. It is made of ironwood and is sharpened at both ends. It is used by the women to dig for yams, roots, small lizards and marsupials. They also use it as a weapon in a camp brawl.

Fire Drills and Fire.—The only means of making fire possessed by the Murngin is the fire drill. The drill is composed of two parts, a hearth and a drill stick. The latter is carved into a cylinder, and the former is a rod flattened on one side and convex on the other. The normal length of both drill and hearth is two feet, but sometimes reaches three feet. The hearth is about one-half to one inch wide.

A small hole is cut in the hearth and an incision made so that when a spark is formed by the friction of the whirling drill it may be tipped out quickly. The drill stick is frequently incised with parallel lines. Both pieces are covered with red ocher.

When fire is to be made, dry paper bark is crumbled and formed into a small ball which can be held in the palm of the hand. A tiny bit of charcoal is placed in the hole in the hearth. The fire-maker squats over the stick, holding it in place with his feet while he whirls the drill with his hands. The end of the drill in contact with the hearth is slightly rounded; intense friction is created by rubbing the charcoal against the dry wood of the hearth. When a spark appears it is dumped into the ball of paper bark and blown on by the native or swung back and forth in the wind until the paper bark has caught fire.

Fire sticks are the permanent equipment of both men and women and are nearly always found in the personal baskets of each. They are not used, however, every time a man wishes to make a new fire, for fire brands of the inner core of a pandanus which burns like punk are usually carried by the men when they go on journeys.

When fire is to be used for cooking larger game such as emu, kangaroo, dugong, and turtle, a slight hole is excavated in the ground. Round smooth river stones about the size of a man's two fists are gathered and placed in the fire in the shallow pit. Sticks are put on top of them so that the fire continues burning. Dampened paper bark or green leaves are then placed on the fire. Large chunks of meat are put on top of the green leaves, then an upper covering of leaves and paper bark is added to prevent the direct contact of the fire from burning the meat and also to help steam the food. The hole is covered with sand so that a kind of earth oven has been made.

1: Warner E-5 (1926-1929)1937
OI 17 Murngin OI 17

252 This type of earth oven is made only for cooking larger animals. Fish, except minnows, are cooked on the open fire; minnows are carefully wrapped in paper bark and placed in the ash of a camp fire for cooking. A camp fire ordinarily used for cooking purposes is always made on a layer of earth taken from the nest of an ant bed. This earth is a kind of clay and holds its warmth longer.

Sometimes ground-fires for cooking are made by heaping a pile of stones in a hollowed-out spot and building a fire on them. After the stones are hot, paper bark and leaves are placed on them, the chunks of meat put in with bark and leaves over them, and the whole covered with sand and allowed to steam.

373 Pandanus palms are lighted to make a beacon for parties of canoes traveling at night in friendly country. They are also fired for certain totemic ceremonies.

322 To straighten a spear shaft, it is heated until the outside is smoked, then the maker holds the part of the shaft that is to be straightened between his two hands, places it against his knee, foot, or in his mouth, and pulls upon it. This process is repeated until, sighting along the shaft, it is seen to be straight.

304 Scarifications are made by pressing burning brands against the skin until the inner skin is burned through and a large welt formed. Ash is put inside the burn.[4]

412 *Stone Axe.*—All axes are of the ground-stone variety in this district, as they are everywhere throughout Australia except in the southwest.

They are made usually from smooth river stones. They normally weigh two and a quarter to three pounds, and vary from three to five inches in length, from two and one-half to four and one-half inches in width, and about one-half to one and a half inches in thickness at the larger end. The [324] axes are convex on both sides. The hafted end is usually slightly flaked to make a rough surface.

The stone blade is hafted to a wooden handle in the following manner: a small pliable stick is flattened on one side and bent in the middle so that the two ends meet. The axe head at the hafting end has been covered with beeswax. The stick is bent over the head and wrapped tightly with fiber string near the stone blade to hold it in place. Sometimes a pandanus circlet is plaited about the hafting instead of cord being used.

[324] The stone is ground to a sharp edge. The surface sometimes is ground only along the edge, but usually grinding extends to the border of the portion covered by the beeswax.

The handle is from ten to sixteen inches in length, but the norm is thirteen inches.

177 The Malays brought the steel axe for trading purposes and the white man has continued this process, so that the stone axe is seldom made today.

[4] Scarification is also produced by cutting.

1: Warner E-5 (1926-1929) 1937
OI 17 Murngin OI 17

The technique has not been lost, for several old men know how they are made.

Food Grinding Stone.—These small stones are used to grind up seeds or nuts gathered by the women and to break mussel shells. They are three or four inches in length, the same in width, and about two inches in thickness. A rock of the proper shape is used and no artificial shaping is done. However, there is a socializing agency at work, in the sense that a round rock flattened on the two opposite sides is preferred and, further, the grinding gradually works the center into a cavity; such a stone has now assumed value and is sought for by a woman in preference to a new stone. The depression is sometimes an inch and a half deep. The stone weighs about a pound and a half normally, but varies from one-half to two and a quarter pounds.

A larger-sized grinding stone also used by the native women is five inches by three inches and weighs about four pounds. It is also flattened on two sides.

The upper grinding stone, or grinder, is usually egg-shaped and is nothing more than an untreated smooth water stone. It has a diameter of about one and one-half inches and weighs from one-eighth to a quarter of a pound.

Camp Wells.—Two types of wells are dug during the dry season. The first is made more or less unconsciously by each person's excavating a small amount of earth from the bottom of a shallow water hole and continuing this process as the water dries up in the latter part of the season. The second variety is purposefully dug where water is known to be. It may be one or two feet in diameter or large enough to allow a man to get down in it to fill his paper-bark basin. Wells of this type sometimes reach a depth of four or five feet. Associated with an artificially constructed well is usually found the long-handled paper-bark container, made by attaching a long stick to an ordinary container with fiber string.

Bridges.—The Murngin often construct rude bridges by placing one to three tree trunks over the smaller streams about the camp.

7. Articles Used in Ceremonies

Feather Headdresses.—The chief materials used in making feather headdresses are resin, beeswax, fiber string, feathers of various birds, leg bones of birds, and wooden or sting-ray prongs. The feathers are hafted to the wooden, bone, or sting-ray pins with ironwood resin. White and black cockatoo tail feathers, the crest of the sulphur-crested cockatoo, emu, jabiru, egret, heron, native companion, goose, and duck feathers are the chief ones used, but feathers of other birds are also utilized.

The pin of the Gunabibi type of headdress is four to six inches long, and usually incised and ruddled if of wood. Sometimes the pin is made from the leg bone of a bird. The resin or beeswax hafting is in the shape

3: Mountford E-5 (1948) 1956 OII7 Murngin OII7

took from the hive so much wax, bee bread (the pupae of bees) and honey that it filled one of the honey baskets. The place where the tree fell is now the fresh-water stream, Gurakawi, which runs into Trial Bay.

Again the brother and sister walked northwards, this time searching for the *dua* female wild honey, *liruwar*. Near Caledon Bay they again followed a bee to its hive and, after cutting down the tree, filled another honey basket. The depression made by the fallen tree has since become the Mandarauik River. Still searching for honey, the brother and sister saw many bees near Port Bradshaw but were unable to locate the hive, because the bees, instead of flying to and from their nest, were drinking at a spring. The next bee led them on a long journey from Caledon Bay, cross-country, to Cape Wilberforce, where the contents of a particularly large hive at Jarauna, near Melville Bay, filled many baskets. Again, the tree they felled created a watercourse, this time the Wandarani River.[78]

As *Oijal* and *Neri-neri* were pounding the comb to extract the honey, the sound attracted the attention of a lizard-man. Seeing the brother and sister had collected so much honey, he asked for some and they willingly gave it to him. But as the lizard-man was eating the honey a fragment of stick caught in his throat, causing him to cough and almost choke. For a long time he tried unsuccessfully to extract the stick, then, in disgust, he changed himself into a blanket-lizard, *baltjiru* (*Chamydosaurus kingii*). The aborigines say that the stick, now a thin bone, is still in the throat of the lizard.

After that incident *Oijal* and *Neri-neri* went to a group of large caves near Melville Bay and started to cook the wild honey in a large bark dish.[79] While they were engaged in the task an ancestral man, *Walangini*, was cooking fish at Port Bradshaw. On seeing the large amount of honey the brother and sister were preparing he held up his fish to show what he was cooking, hoping that *Oijal* would offer him some honey in exchange. But *Oijal* insulted *Walangini* by saying that he did not want his fish; honey was much better food.

After the honey was cooked, *Oijal* and his sister went into the caves, where they have lived ever since. No aboriginal will go near the locality, for fear of *Oijal*, who would cripple him by breaking his legs with boomerangs, then spear but not kill him. *Oijal* would then put the wounded aboriginal in a bark dish, take him into his cave, pound his shins with a stone until they were bent like a boomerang, then starve him to death.

The spirit of such a man, unlike those of other aborigines, does not go to the aborigines' heaven, but lives in the forest until able to enter the body of some woman. When born that child will develop boomerang shins.[80]

78. See engraved smoking pipe, Fig. 62B.

79. Some kinds of honey, when first taken from the hive, burn the throat. After this 'hot' honey, called *bilku*, is cooked by heating it for a while in a bark dish resting in the hot sand and ashes of the camp fire, it becomes much milder in flavour. Cooked honey is *baluwara*.

80. The shins of some aborigines are curved and flattened like a boomerang. This is caused by the tropical disease of yaws.

3: Mountford E-5 (1948) 1956 OII7 Muragin OII7

dulwar. This is the totemic place of the mythical man ***Balonarati*** and the paper-bark trees.

During the early days of the world ***Balonarati*** invented the method of preparing *natu* from the fruit of the cycad[6] so that it would be fit for human consumption. ***Balonarati*** first broke the shells, pounded the kernels into flour, placed the flour in a finely-woven basket and soaked the load for three days in running water to remove the poison. At the end of that time he stripped sheets of paper-bark[7] from the adjacent trees and taking the sodden flour from the water, wrapped it in the paper-bark and allowed it to drain for several hours. After this treatment the flour was ready to eat. ***Balonarati's*** invention, still in use, ensures a plentiful food supply for the aborigines. The place where the mythical man prepared the cycad flour, *natu*, is now a swamp filled with large paper-bark trees, some of them still bearing the marks where ***Balonarati*** stripped the bark from them.

Two bark paintings, although somewhat similar in design, illustrate different aspects of the same myth.

On Pl. 98C,[8] the transverse bands *a* and *b* are sand-banks on the River Gainmani, and *c* the main track between the north and the south of Caledon Bay. The lozenges are the paper-bark trees in the swamp, and the dots on the ends of the lozenges, fine white dust in the bark which the wild bees collect and carry to their hives. The cross-hatching indicates the pieces of bark lying about the base of the tree after the stripping is finished.

Plate 98B represents an individual tree at Matamatani. The lozenges on the upper and lower panels indicate places on the trunk from which ***Balonarati*** had stripped the bark, and the dots, like those on the previous painting, the white dust which the bees take to their hives. The cross-hatched bands surrounding the two panels indicate the upper part of the tree which the mythical man, being unable to reach, could not strip of its bark.

The Man, Rualko, and the Turtle, Murutu-murutu, at Cape Shield

The *jiritja* man ***Rualko*** lived, during mythical times, on the beach at Cape Shield. He ate only the eggs of turtles and sea-birds.

On Pl. 98D the central panel is the track of the female turtle, *murutu-murutu*, the herring-bone design being the marks she made in the sand as she crawled from the water to lay her eggs. The inner oval at *b* is the sand disturbed by the turtle in the preparation of her nest, and the dots in the outer oval her eggs. On his way to the turtle nest (see footmarks, panel *c*), ***Rualko*** collected the eggs (dots in panel *c*) which the four black seagulls had laid on the path. His returning footmarks are shown in panel *d*. The horizontal groups of wavy lines *e*, *e*, *e*, are the marks made in the sand by the sand-crabs, *gunjun*, and the semicircles

6. This fruit is poisonous if eaten in its raw state.
7. Paper-bark, being particularly soft and flexible, is used for a wide variety of purposes.
8. Interpretation by F. D. McCarthy.

3: Mountford E-5 (1948) 1956 OI17 Murngin OI17

*773
*532

male, left, is entering it. The background design[78] represents the fallen leaves of an unidentified palm. The symbols in panel *c* represent the fallen leaves of the same tree. In panel *d* the male and female goannas are travelling in the one direction. The background is the same as elsewhere, fallen palm leaves.

The Man, Oijal

This myth has already been related in association with the relevant bark paintings of *Oijal* and his sister, *Neri-neri*.[79]

The designs on this pipe, Fig. 62B, belong to a large hill, Tjiruru, the totemic place where *Oijal* cooked his honey. The two groups of long parallel lines, *f*, *f*, in the left-hand panel symbolize the river, Wandaraui, which was created when the brother and sister felled a tall tree in their search for honey. The sloping lines, *b*, *b*, are the subsidiary streams that run into Wandaraui River, which, in turn, empties its waters into Melville Bay. The small gutters made in the surrounding plains by the wet-season floods are shown by the marks *c*, *c*. Lines *e* indicate the hill, Tjiruru, the totem place of *Oijal* and *Neri-neri*. In the right-hand panel, the groups of crescent-shaped lines, *a*, *a*, picture the boomerangs of *Oijal*. The transverse marks on the boomerangs are lines of paint.

The Fresh-water Goanna, Bije

[317] The fresh-water goanna, *bije*, found yellow ochre near a stream at Gurunga, a few miles south of Caledon Bay. Since then the men of the *jiritja* moiety have visited that place to collect their ochres.[80]

In panel *c*, Fig. 62C, the fresh-water goanna is lying among the rocks and water of his totemic place. The designs with the transverse bars in panels *a*, *c*, and *d* symbolize the fresh water running between reefs of yellow ochre (the blank spaces). The groups of parallel lines at *b* indicate where it is possible to ford the stream. Panel *d* shows where the stream, discovered by the water-goanna, enters the ground and disappears.

The Man, Ngulamung, Blue Mud Bay

The myth of this *jiritja* pipe centres round the mythical man *Ngulamung*, who frequented the swamps in the *mularapa* clan country, at Blue Mud Bay, to collect water-lily bulbs, *jouku*. As *Ngulamung* collected the bulbs, he put [252] them in a carrying-bag, took them to his camp and, raking back the embers, buried the bag, bulbs and all in the hot sand and ashes.[81] Two other totem creatures are included in the engraved design, the toredo worm, *kaula-warak*, and the fish, *bununba*.

Fig. 62D is the complete design of the pipe. In panel *a* are two fresh-water fish, *bununba*, the meandering lines originating at the tail of the upper fish

78. This is similar to the *mata* design of the *ngrimil* language group of Arnhem Bay, Fig. 61B.

79. Myth, p. 292. 80. See myth, p. 371, also bark painting, Pl. 118B.

[253 1777] 81. The aborigines claim that this method of cooking water lily bulbs was used in times past. It has been discarded in more recent years.

222 constitute staple foods, are gathered in great bulk, which
262 can be measured in tons, and these plants provide as regular a harvest of food as cultivated gardens. In Eastern Arnhem Land the most important of the staple foods are *ŋätu*, the fruit of a Cycad, two or more species of yam, one, a long yam called *gulläkku* (*Dioscorea transversa*) and a round
[252] yam *djitama* (*D. sativa*, var. *rotunda* etc.) which possesses a poisonous property which must be leached out after cooking, *kinipirri* (a wild *Taro*), very local in distribution, and *dirrpo*, water lilies, (*Nymphaea*) of several species, of which both seeds and rootstocks are eaten. In the coastal area, by far the most important staple food from the time the salt plains dry after the wet until the onset of the rains at the end of the dry season, is *rakai*, the small round corm of the Tall Spike Rush, which grows in great quantities, covering hundreds of acres of ground on the coastal plains, especially in areas subject to periodic flooding with brackish water. The corm of this plant is about the size of a hazelnut, and when eaten raw, has much the same flavour. *Rakai* is also
[252] cooked, and is prepared by roasting in hot ashes, when it is hammered with a wooden mallet into the form of a small cake resembling nut-meal of coarse texture.

252 The fruit of the Cycad, *ŋätu*, which was mentioned above, must be soaked for a period of from three to five days to leach out soluble poison which it contains. After this it is ground, moulded into a cake which may weigh several pounds, wrapped in a neat parcel in paperbark, and cooked in hot ashes, when it bears a resemblance to a very heavy,
262 coarse, unleavened bread. Vast quantities of *ŋätu* are gath-
[251] ered in the course of the year. It has the merit that, unlike most other foods of the aborigines which must be eaten immediately after preparation, it can be kept for some days or weeks. The fact that it is very abundant gives *ŋätu* a

9: Thomson E-5 (1935-1943)1949
OI17 Murngin OI17

special value in native economy, for it enables the women to maintain an adequate food supply on ceremonial occasions when hundreds of people are gathered in one camp for weeks or months at a time, who could not otherwise be supported for such periods on local resources. *ŋätu* is also the principal food eaten in Arnhem Land on ritual occasions. After it has been received by the old men it is then dedicated ceremonially to the *räŋga*, the sacred totemic object, by the *Dälkärrämirri*, who recites aloud over it the "big" or sacred names of the totem. It now becomes sacramental food and may not be eaten or even handled by the profane, that is, by any but men fully initiated to the particular totem to which it has been dedicated.

Although, as was stated above, *ŋätu* can be kept, after preparation, for several days, the natives of Arnhem Land, in common with other Australian aborigines, do not store food, but are dependent for their subsistence on the result of each day's hunting. In Arnhem Land a single species of fruit, *mundjutj*, (*Buchanania Muelleri*), which is harvested in great quantity in the wet season, chiefly January and February, is sometimes spread out in the sun to dry until it becomes wrinkled and shrivelled like a prune. It is then distinguished by a separate name, *bindjitj*, from the fresh fruit, *mundjutj*. The method of preparation is as follows: After a preliminary exposure to the sun the fruit is rubbed with red ochre and again dried until it is hard and brittle, after which it is wrapped up neatly in parcels of teatree bark. In this form *bindjitj* may be stored for weeks or even months—a practice almost unprecedented among these nomadic hunting people. The subsequent preparation of *bindjitj* is carried out by pulverising the dried fruit, including the hard seed, with pounding-stones, wetting both fruit

9: Thomson E-5 (1935-1943) 1949
OI17 Murngin OI17

and pounding-stone with water during the process. The dried fruit may also be prepared by soaking in water or it may be mixed with the pulverised flesh and bones of the Red Kangaroo, *kärritjämbäl*, into a kind of paste, in which form it is greatly relished.

The only other instance, in my experience, of an attempt by Australian aborigines to store vegetable food, was on Western Cape York Peninsula, where the fruit of the Nonda Plum (*Parinarium Nonda*) was stored in deep holes sunk in dry sand, where it was kept for some time. The desiccated fruit was then prepared in the same way as *Buchanania* was treated in Arnhem Land, by pulverising the fruit, together with the hard stone or kernel, with a pounding-stone and soaking it in water. The two examples quoted above are of considerable interest and are important economically, for they appear to represent the beginnings of the practice among a nomadic hunting and food-gathering people of conserving and storing food.

The implements and domestic utensils used by the women are simple but well made, in each case by a technique which is perfectly fitted to the material available. The most important and characteristic implement used throughout most of the Continent is the yam stick. In Northern Australia, this is made from ironwood (*Erythrophloeum Laboucherii*), varying in length from about three feet to five, or a little more, sharpened at one or both ends, the digging points hardened by fire. This serves both as an implement for digging and as a weapon for the fighting in which women sometimes indulge.

Mesh baskets, as well as net or string bags of several types, each adapted to a particular purpose, are carried, and vary according to the chief food in season at the time. These food baskets are slung across the shoulder and suspended

down the back when empty, but when full the weight is usually borne on the forehead, or if the load is a heavy one, the baskets are carried on top of the head.

At first glance, Arnhem Land, like many other parts of Northern Australia, may appear to be barren and inhospitable and to offer little promise for the gathering of vegetable foods. But it must be remembered that over the centuries the aborigines have accumulated great experience of the food plants of their environment, which is handed on from generation to generation, and that they have developed highly specialised methods for exploiting every resource of the territory in which they live. The food resources of Arnhem Land are rich and varied and the natives have developed effective processes for the preparation of its vegetable foods, as well as many clever and ingenious devices for the capture of fish and game.

Again the cooking and preparation of food is far from the crude or haphazard business of popular imagination. *ŋätu* is not the only poisonous plant which is used as food. A number of other food plants also contain soluble poisons which are eliminated by simple and effective, but often prolonged, cooking and washing.

The women are dexterous and neat in all their technological processes, and to watch them at work in the preparation of vegetable food is an object lesson in the skilful and efficient use of the simplest equipment.

The task of the men is to provide animal food, both fish and game. As a rule, when a large quarry such as a kangaroo is killed, it is cooked and quartered on the spot, and is then divided equally among those taking part in the hunt. It is taken back to camp in a cooked or half-cooked state, often wrapped neatly in paperbark. Each man again divides his share of the game according to his obligations defined by

Late in the afternoon, generally about sundown, the people will be seen returning to camp from the day's foraging, the women carrying baskets of food on their heads, rolls of teatree bark (*Melaleuca*) for sleeping mats or for use in cooking, and great loads of firewood. On arriving in camp they light the cooking fires and perhaps make another journey for firewood to carry them through the night, and to bring water from a nearby well or lagoon. If the food to be prepared is of a type which requires much washing during the preparation they may take it close to water to prepare, bringing it back to camp to cook.

Although men do gather some vegetable food, and women also capture small game, besides shellfish, the division of labour is sharply defined and at once evident. The woman is primarily the provider of vegetable food, collectively, *ŋäta*, the getter of wood and water, the maker of light baskets and the smaller and more finely made nets. The man is the hunter, the provider of animal food, and is responsible for the conduct of large scale drives for fish and game. The making of weapons, heavy implements, canoes, canoe paddles, heavy fish traps and baskets of coarse heavy fibre, called *koiyapoi*[18] (fish-for) or *ŋätapoi' larr*, (*ŋätapoi*, food-for; *larr*, open or coarse in texture), for the carrying of heavy loads of fish and vegetable food, is also the responsibility of men.

The first impression that any stranger must receive in a fully organised group in Eastern Arnhem Land is of industry. He cannot fail to see that everybody, man or woman, works hard, and that the work is well organised and runs smoothly. And he must also be impressed by the fact that with the exception of very young children who engage earnestly in play, much of which is imitative and

[18] *-poi*, suffix "for".

BASED ON THE ACTIVITIES OF ADULTS, THERE IS NO IDLENESS.

431 Payments or gifts such as those made by a young man under these conditions are known as *tadoit*, (*ta*, mouth, *doit*, signifying return, turn around, turn back), and they occur on many occasions apart from initiation, in each of which, however, the obligations are similar.

765 784 Mourning and funeral rites among these people are extremely prolonged and are surrounded by many tabus and intricate patterns of obligatory conduct. The group which handles the bones of the dead, which may be carried for some years after they are removed from the ground soon after the initial burial, are called *koŋ wukundi*, lit. "hands tabu", and these people are placed temporarily outside the normal social life of their hordes. Members of such groups, which stand in a special relation to society, [182] remain in the camp, but they live apart, and this is stressed ●[252] by the fact that they maintain separate fires at which they cook their own food, apart. But the tabu is not absolute and others within the camp will occasionally take something, such as a firebrand to start another fire, from this [431] *wukundi* (tabu) place. If this should occur the people who take the fire will send back a small present of food in return. This again is called *tadoit* (*vide infra*). If they should omit to make this present they are in danger, after having eaten food cooked at the *wukundi* fire, because they have shared in the solidarity of a group, members of which are linked by the bond of their special relationship with the deceased and so are set apart temporarily from the normal social life of the horde.

431 765 182 The bones of the dead are handled at intervals during the prolonged mortuary rites, and each time this occurs, the small group on whom falls the obligation of doing it, makes presentations called *koŋ doit* and *ta doit*. The

10: Warner E-5 (1926-1929) 1958
OI17 Murngin OI17

159 the English Company Island, people who still remembered how to do it
[501] (pages 459-460). Some of the people came out to our boat by lying on a large log and paddling with their hands and feet. I got in the dinghy and went ashore with some of the people on the boat. When my mari saw me
[152] he cried and cried. Some people are like that among us black men. We cry when we meet people just as we cry sometimes when we tell them goodbye. I tried to talk to him, but I couldn't say anything. It was just the same as if I had lost my language. I had to talk to him in the sign language. I felt very foolish. I brought flour with me, but they did not know what it was.
[252] They cooked flour in paper bark just like they did palm tree flour.
[609] All the people were very angry with the white man for keeping me away so long, and some of them sneaked out in the bush and got their spears and clubs and were going to kill the white man. I said no, that it was no good. I said, "The white men talk very hard and sometimes they swear at you, but inside they are all right. Sometimes when they swear, they mean
[439] good." While we were there I got my people to make gifts of turtle shell and pearl to the white man, and he gave them hatchets and knives and calico. I got in the boat and started to go back to Port Darwin with the white man. Cape Don Tommy and the white man quarreled when we got to Croker Island because Cape Don Tommy wanted to sleep on shore. We got out at Croker Island and went by canoe to Cape Don. There I met that girl again, but her husband was there then. We went on to Port Darwin for a moon and came back to Elcho Island. Once more I went into the bush and stayed.

His Wives and Their Parents

159 581 828 825 Black men walk about single and by themselves. At first they have no mates. By and by they find one that belongs to them. By and by children come. White men walk about by themselves. By and by they find a woman, and more children come out. The Macassar man was all the same.

Big old man kangaroo walks about single and by himself. By and by he catches his woman, and then there are little kangaroos. Opossum and fly and bandicoot—they are all the same.

Python catches his mate and by and by there are eggs, then there are children. Frilled-neck lizard, native companion, honeybees, pigeon, hawk-billed turtle, and all those animals—they are just the same.

Black men cut down trees and by and by little ones come up. Everywhere and all the time it is always the same. Walk around single, by and by a mate, and by and by children. There is an inside meaning to this. Some of
159 581 828 773 825 us old men who are not fools understand. If those two Wawilak creator sisters had not done wrong in their own country and fornicated with those

15:Chaseling M-5 (ca. 1934-1936)1957
OI17 Murngin OI17

are either fibrous, tasteless, or poisonous, and sometimes they are all three. Three or four varieties are palatable if eaten raw, but become hard and indigestible when cooked. Ingenious methods are used to prepare poisonous yams, which are roasted or steamed before being shredded or pounded into a sticky dough. In one camp I saw women going to endless bother to cook these yams, and imagined that they must be a delicacy, but an old man said they were called 'tchikkyugga'. 'Tchikky' (cheeky, in pidgin English) is used for anything hostile or dangerous, and some beachcomber had probably called this yam a cheeky ——, and his description has remained.

'Bareela' (*Dioscorea Sativa var*) is a dangerously poisonous yam resembling a light-skinned English potato, and it is cooked on hot stones covered with sheets of bark and sand. It is steamed thus for an hour or more before being thrown with certain leaves into a shallow trench which is covered with bark and sand over which a fire is kept alight for between fifteen and eighteen hours. Finally the yams are removed and prepared for consumption by being pounded into a glutinous mass like gritty plasticine.

'Jittama' is also a poisonous variety and is shredded on the sharp edges of a snail shell so that the pulp can be packed into a network dilly-bag and soaked in a waterhole. The pulp ferments quickly and must be eaten in the early morning, for if it is kept in the heat or, as the Yulengor say, 'till the sun is over our heads', the children suffer from sick headaches.

In many low-lying areas, hundreds of acres of swamp are covered with ferns, or 'karkor'. These black fibrous roots, similar to bracken roots, are roasted, drawn through the mouth, and chewed to extract the gluey starch. A regular camp of a hundred or more nomads was made each year near such swamps at Cape Arnhem and they lived almost entirely on this unappetizing fibrous root.

YULENGOR

262 [133] [222] [252] Lagoons overflow in the wet season and hundreds of acres of low-lying land are under water. It is country where water-lilies grow in profusion. Women dive for the root-stocks and roast great quantities of them. Lily seed-pods are eaten raw, sieved through network dilly-bags, or ground between stones and baked into cakes.

[137] [222] The most palatable of all vegetable food is probably the corm or swamp rush, 'rarkai', and these swamps are famous throughout Arnhem Land. Rarkai rushes cover brackish swamps near the coast, and women systematically turn over many acres of black mud in their search for the nut. In east Arnhem Land I know of several such swamps, each of which [361] [796] supported a hundred or even two hundred Yulengor for six weeks at a time. During the corm season the hordes make the swamps a rendezvous for corroborees, ceremonies, and initia- [574] tions. Corms are about the size of marbles, and in addition to being the most nutritious of all their vegetable foods they possess a pleasant nutty flavour.

[771] Several foods have totemic significance and find a place in ceremonial practices. Probably the most important of these is 'ngutu', the nut of the cycad palm, and it is said that this yellowish brown nut was first eaten by spirit-Ancestors, [773] who instructed their daughters in the art of preparing it. [462] Legend declares that as the knowledge was received first by [222] women, they have for all time to attend to the gathering and cooking of all vegetable foods.

262 252 Hard-shelled cycad nuts are cracked between stones, and the kernels soaked in water for three or even five days. Most of the poison is thus leached out, and the pulp is wrapped in bark and buried in hot sand over which a fire is lit. Cycad meal can be baked into flat coarse cakes that sometimes weigh up to fifteen pounds, that keep for days, and can be carried long distances for use at ceremonial gatherings. [574] 'Ngutu' has sustaining properties, and Yulengor live on it for weeks as they prepare for inter-tribal corroborees.

15:Chaseling M-5 (ca. 1934-1936)1957
OI17 Murngin OI17

Old men sometimes demand a further treatment of the food, and the partly cooked damper is then kneaded into a wide, thin layer and rolled into bark before being re-baked. By this final process the 'ngutu' becomes impregnated by tabu, and only fully initiated males may eat it. I have seen men delirious in the cycad season; though not showing other ill effects, they do not recover for several weeks. Kuninyal suffered in this way, and I remember he was the sport of the camp and became thin and haggard through not being able to hunt for himself. It was openly stated that he had been eating half-cooked cycad cakes.

Many nuts, berries, and fruits are found in the bush, but they are not very enticing. Some are as large as cherries, but the majority are the size of currants. Wild cashew nuts, ripening at the end of the dry season, are the most favoured of all. Small bright red and orange cashew fruit are attached to kidney-shaped brown nuts which are full of prussic acid. A thick skin on the nut also contains acid, and it is roasted to extract the kernel, which tastes like a tiny potato with a peanut flavour. In the roasting process, acid spurts from the fire, and fumes in the smoke severely burn anyone near by. Children develop scaly blisters, and women tending the cooking fires receive extensive burns.

'Larrani' trees, with their grey branches and large green waxy leaves, make a gay sight when they are loaded with bunches of ripe red fruit. The fruit looks like red apples, but they have large woody kernels and very little flesh. Large quantities are gathered, and hunters use them to slake their thirst; but I must confess to finding that their astringency only increased my desire for water.

Another popular fruit comes from the beautiful East Indian tamarind tree, which thrives and bears prolifically around old Macassar watering-places. The seed pods are filled with a pleasant acidulous brown pulp which can be stored, but nomads strip the trees and eat the fruit long before it is ripe.

15:Chaseling M-5 (ca. 1934-1936)1957
OI17 Murngin OI17

one flipper and swimming with the other. It is said that ancient mariners, seeing dugong for the first time, framed the original story of the mermaid. 136

Methods of cooking meat and fish are simple, though not very thorough. Snakes are coiled and cooked in the ashes, and small animals, birds, flying foxes, grubs, and snails are roasted in the coals. Turtles, dugong, porpoise, and kangaroo are sometimes jointed and packed on hot stones; sheets of paper bark and sand are piled on top, and a small hole is left at the apex of the mound for appetizing steam to escape. However, hungry hunters often will not wait for women to go to all this bother, and they slice the meat and eat it after holding it near the hot ashes till the surface is slightly singed. 252

15:Chaseling M-5 (ca. 1934-1936)1957
O117 Murngin O117

361 mainland to hunt for turtle eggs, the island is deserted.

266 I saw hordes behind Boucaut Bay practising a form of
m3 cannibalism and eating their dead. A wealth of tradition
[764] lies behind this custom, which originated with the eating of their tribal Ancestress. This prehistoric giantess came from the west and finished her labours at Boucaut Bay, where she made a plain and a swamp full of vegetable food and fish. Near by she bore children and established the local hordes. Many years later the Goddess died and left the horde the problem of disposing of her body. She had been an active Goddess, and the hordes had depended on her, and now, as they had no desire to lose the prestige she had given them, they retained her strength by eating her body.

The precedent of the Goddess is advanced as the reason for continuing the custom of eating dead relatives and enemies killed in battle. All hair is scraped off and burnt,
266 intestines are removed and buried, and the head is severed
764 from the trunk. Meanwhile relatives prepare an oven
[052] by digging a trench, lining it with stones, and lighting a fire on top. When the tempo of singing and dancing has increased to fever-pitch, the skull is pierced and the brain removed, wrapped in bark, and given to the mother to guard. The skull is cooked, separately cleaned, painted, and hoarded. Removing the bones is a lengthy process and must be done carefully so as not to sever the limbs. All bones are exposed in a tree to bleach before being painted and hoarded till it is convenient to pack them in a burial-post.

When the stones in the trench are hot, the coals are scraped away, and a relative grasps the hands of the now boneless and headless body, drapes it over his shoulders and dances among the chanting, wailing horde. It is lowered into the trench-oven, covered with bark and sand and
[533] allowed to cook to the accompaniment of singing and dancing. Most chants relate to the departing spirit, and in